



North Carolina Department of Transportation
Transportation Program Management Unit - Value Management
Innovative Technologies and Products Awareness Report
November 1, 2017

PRODUCT INNOVATION – ACOUSTASHIELD

Carsonite's AcoustaShield™ Sound Barrier System is a noise abatement product for use along transportation corridors. NCDOT considers noise abatement when traffic noise impacts are identified on projects that build on new location, add new lanes, add interchanges, or re-align a road. Feasible and reasonable (and in some cases, practicable) abatement, usually in the form of noise walls, is then incorporated into project design. Noise walls help reduce the noise levels experienced by homes, schools, parks, and other noise-sensitive land uses adjacent to a highway project. This product is a lightweight composite material that can be stacked and installed by a small crew without heavy lifting equipment. The planks stay in place through a tongue-and-groove system and can be cut in the field. AcoustaShield™ product's lightweight design can facilitate its use on bridges. These innovative characteristics save the Department time and money.



Example of AcoustaShield™

Installed along a transportation corridor.

This sound barrier can be customized to fit the sound absorption needs by using unfilled or filled planks with fiberglass insulation. When planks include a fiberglass screen, the screen prevents insects from nesting inside the plank and causing degradation. The composite material is made of continuous glass fiber reinforcement and is resistant to the elements, UV rays, and freeze-thaw cycles. The unfilled version of this product is accepted for use as a field trial and is being reviewed for use as a part of the Greensboro Urban Loop project in Guilford County.

For more information visit: <http://www.carsonite.com/products/sound-barriers>.

TECHNOLOGY HIGHLIGHT – ANYRISK

ANYRISK is a new safety program that was developed by NCDOT to improve worker safety. Any NCDOT employee or contractor can anonymously report on a hazard, near miss, or at-risk behavior. The submitted information can be done from a computer, tablet, or smart phone and can be called in through the 24-hour hotline.

The screenshot shows the 'TYPE' tab of the ANYRISK mobile app. It includes a 'Type' section with a dropdown menu for 'Type of hazard *' and a text field for 'Other hazard or comments'. Below this is a checkbox for 'Did an incident occur because of the hazard?'. The 'Description of event *' is a large text area. At the bottom, there are two sliders: 'Rate Hazard: 1 - Low' and 'Exposure Frequency: 1 - Improbable'.

Image of first page of submission.

Once the ticket has been submitted, it is immediately sent to the Safety Supervisor for that Division or Business Unit. The Safety Supervisor can then share the ticket with the more immediate staff closest to the issue and the problem can be solved in a quick and decisive way. ANYRISK is NCDOT's first true offline-capable mobile responsive tool. ANYRISK submitters in rural, low connectivity, areas won't have to worry about losing their information when submitting forms – ANYRISK will hold it until the user gets enough signal to send it in. This tool does not replace workplace injury reporting – it is an enhancement to the Department's safety program. The data collected from the ANYRISK program will inform the Department where hazards are continuously present in terms of geographical area, type of work, time of day, and type of injury. By collecting this information, the Department can make positive changes that may prevent these hazards from reoccurring which will improve the safety in the Department while also saving time and money. It is projected to have a Return on Investment of 5 (five) years. It is being rolled-out to all employees this month, November 2017.

This innovation was developed internally within the Department by NCDOT employees, spearheaded by Rob Barfield and Jarvis Gray. Visit <https://connect.ncdot.gov/anyrisk/Pages/default.aspx>.